BOOKS RECEIVED.

FOUR LECTURES ON STATIC ELECTRIC INDUCTION, by J. E. H. Gordon, B. A., Assistant Secretary of the British Association—16mo, price 80 cents. D. Van Nostrand, New York, 1881.

These lectures, which were delivered before the Royal Institution of Great Britain during the early part of 1879, convey, in simple and clear language, an explanation of the laws of the induction of electricity, pointing out the problems connected with it, which have been solved, and what remains to be done in this direction.

About forty illustrations take the place of the lecturer's apparatus, and will be found a great aid to the reader in following the text. As a popular guide to a subject of great present interest, this little work, from so reliable a source, should be welcome. As the author admits, our knowledge of electricity is very incomplete; the question, What is electricity? still remains unsolved. Of the phenomena considered in these lectures, a few only can be explained, the experimental facts standing out alone and disjointed.

Many lines of reasoning and research open out a little way and then are lost in the darkness through which, as yet, human sight cannot pierce.

The magnitude of the experiments and the exhaustive researches of Edison are making these difficult ways clear and trodden paths, utilizing the disjointed facts and weaving them into one perfect and harmonious whole.

NATUREN.—Et illustreret maanedsskrift for populær Naturvidenskab, udgivet af Hans H. Reusch, cand. real.—Assistent ved den geologiske Undersögelse—Kristiania—Trykt hos A. W. Brögger. Vol. I, No. 2, 1880.

The gratification which attends success, must, in the case of the Editors of *Nature*, have been increased by finding that their journal has become the model for scientific weekly journals in other countries.

France, Germany and Italy have each their *Nature* published in their respective languages, and we have now to congratulate Norway on possessing an excellent scientific journal on the some model.

The cultivation of science in Norway is of recent date, the first efforts in this direction being contemporaneous with the foundation of the present constitutional monarchy in the year 1814, when the separation from Denmark took place. About this time also the first Norwegian University was organized.

The short time the constitution of Norway has existed appears sufficient to prove that political freedom and independence—if not absolute conditions—are at least powerful vehicles for the intellectual development of an energetic people.

As might be expected the strong and impulsive enthusiasm which arose from this political regeneration was not at first concentrated on the solution of scientific subjects, but the intellectual life thus created found expression in a more æsthetic tendency, and poets who then and later arose are remembered and appreciated, while the Norwegians still treasure the names of Welhaven, Wergeland, Björnson and Ibsen.

Of those Norwegians who have established a reputation in the field of science may be mentioned Professor Christopher Hansteen, known by his researches in Magnetism, and as an eminent mathematician. He died in 1873, and may be said to have been succeeded by Professors O. J. Broch, Sofus Lie and Bjerknaes.

Professor Michael Sars has done excellent work on the lower fauna of the country, and his son, Professor G. O. Sars, has written several important works on the subject.

In Botany honorable mention may be made of Professor N. M. Blytt, and in Geology we refer to Professor Sjur Saxe, who is the author of some admirable works on the glaciers and snowfields. Professor Th. Kjerulff is also a high authority on the same subject.

Among those who have contributed to the literature of Medicine we may name Professor W. Boeck, who died in 1873, and Dr. D. C. Danielsen.

Professor P. A. Munch, who died in 1863, established a high reputation by his historical works, and Professor Sofus Bugge's researches in respect to the ancient languages have been recorded in works which are much esteemed.

The present number of "*Naturen*" now before us, which was the second issued, is printed on good paper, and is well printed. The contents are somewha popular in character, the first article being one of a series on the five senses, entitled "*Synet*" [sight] with ten illustrations. The second article on "*Lungefiske*," [Lung fishes] is also illustrated with drawings of the *Lepidosiren paradoxa* and allied forms. The number concludes with minor articles of interest.

We understand "*Naturen*" will be well patronized and we wish the promoters of the paper every success.

NOTES.

A PATENT has been granted for an electro-magnetic rock-drill. A drilling tool is directly attached to the core of axial magnets and arranged to impart to said core a reciprocating motion. The current is shifted alternately to the coils.

AN application for a patent for the photophone was filed at Washington on the 28th of August, 1880, by Bell. The Patent Office *Gazette* of the 7th of December shows that the patent has been granted.

PHYSICO-CHEMICAL ANALYSES OF SOILS.—M. Pellegrini has compared the methods of Schlœsing, Nœbel, and Masure, and obtained such differences as clay, 37 and 87; sand, 1.5 to 28. He considers Schlœsing's method the most satisfactory.

The conclusion arrived at by G. Hauser, in regard to the organ of smell in insects is as follows: The organ of smell, in all the Orthoptera, Pseudoneuroptera, Diptera and Hymenoptera, also in a large part of the Lepidoptera, Neuroptera and Coleoptera, consists: 1. Of the antennal nerve. 2. Of a terminal perceptive apparatus consisting of rod bearing cells arising from hypodermic cells, with which a nerve-fibre connects. 3. Of an apparatus consisting of a pit or a cone filled with serous fluid which may be considered as simple infolds and projections of the epidermis.

Considerable encouragement to naturalists living in cities should be afforded by the amount of botanical work executed by Mr. L. P. Gratacap, on a few vacant lots, in the City of New York, known as Manhattan Square. A short time since the inequalities of the ground were filled up by earth which was carted in, the result being the introduction of an army of plants which soon covered the ground with a mantle of waving weeds. A careful examination of these plants showed them to be composed of 35 orders, of 99 genera, and 117 species.

M. Levoiturier, an entomologist, of Elbeuf, has communicated to the Société d'Acclimation the result of an enquiry as to Coleoptera found in wools from different parts of the world. The author's list is quite a long one, and it is stated that by its inspection the origin of a particular sample of wool may be ascertained, which knowledge is important, as the net return from wool, after scouring, varies greatly. The list comprises, for Australia, 47 species of insects; Cape of Good Hope, 52; Buenos Ayres, 30; Sapin, 16; Russia, 6.